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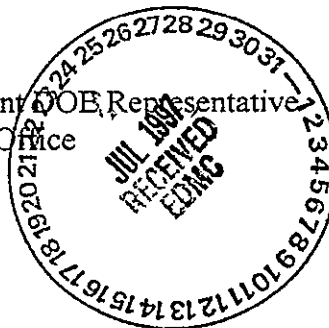
Nez Perce

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ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT
P.O. BOX 365 • LAPWAI, IDAHO 83540-0365 • (208) 843-7375 / FAX: 843-7378

June 26, 1997

Mr. Robert K. Stewart
Columbia River Comprehensive Impact Assessment DOE Representative
U.S. Department of Energy, Richland Operations Office
P.O. Box 550, (HO-12)
Richland, Washington 99352



RECEIVED

JUN 24 1997

DOE-RL/DIS

Dear Mr. Stewart:

The Nez Perce Tribe Department of Environmental Restoration and Waste Management (ERWM) has reviewed a copy of: **Draft Screening Assessment and Requirements for a Comprehensive Assessment, April 1997; DOE/RL-96-16 Rev 0, UC-630** (The CRCIA Document). The Nez Perce Tribe ERWM has included comments on this document with this letter.

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Since 1855 Nez Perce Tribe treaty rights in the Mid-Columbia have been recognized and affirmed through a series of Federal and State actions. These actions protect Nez Perce interests to utilize their usual and accustomed resources in the Hanford Reach of the Columbia River and elsewhere. Accordingly, the Nez Perce Tribe ERWM has U.S. Department of Energy (DOE) support to participate in and monitor relevant DOE activities, including comment on the CRCIA document.

The Nez Perce Tribe favors protection of the Columbia River through comprehensive development of risk developed through the CRCIA. ERWM believes the Columbia River is at risk from potential radionuclide and toxic chemical releases from the Hanford site. Proper mitigation for these releases can only be attained by complete understanding of all processes, facilitated by continuation of the CRCIA effort.

The Nez Perce Tribe ERWM is impressed with the Draft CRCIA document and supports it's premises, we do however have some general comments (Below), with specific comments is the accompanying addendum:

- Although ERWM is happy with DOE management of the CRCIA team, we have some doubts as to DOE's commitment to the CRCIA process. DOE has held CRCIA Team membership from the beginning of the process, with powers of process development similar to other team members. Why does DOE place a disclaimer at the beginning of Part II, are we to assume DOE is

not in favor of a comprehensive assessment? ERWM would like clarification of this question from DOE.

- ERWM is quite satisfied with the assessment of risk to humans in the screening assessment. The incorporation of Native American scenarios into risk documents are long overdue. Proper assessment of human subsistence along the River can now be initiated.
- ERWM has some comments concerning section 4.0. The first criteria that must be met for any figure is that it is easily understood by all readers. Figures 4.1 and 4.2 have never met this criteria and in their present form are inadequate for a document that will be read by a broad spectrum of people. Lay and professional readers alike think that these diagrams are too hard to follow and understand. There are other ways to present food web diagrams so that they can be readily understood. If you will recall the Nez Perce Tribe ERWM Department as well as the Washington State Department of Fish and Game wrote letters over a year ago regarding these food web diagrams. It appears that our comments were never taken seriously or addressed because these figures have not changed in any significant manner.
- The CRCIA team spent considerable time writing the requirements document; but, some problems may still exist with the document. One problem is the complexity of this work. We need to remember that groups proposing studies may review this document to help design their studies, if it is too complex or wordy they may choose not to follow its precepts. Dominance is a good driver for the direction of a study and part II would have us direct funds accordingly, but do we have enough information to decide which variables are dominant? We also need to realize that some studies are going to be incomplete by nature; the best we may hope is that another study will overlap and provide information to complete our understanding. We are not going to get a part II balanced study in many cases, it is up to us to put the studies together to get what we need. Granting organizations, funding studies are going to decide the focus of studies, not the Part II document.
- Certain aspects of part II and the CRCIA management team make real sense. We need a CRCIA management team to review Columbia River data and make subsequent management decisions. A main advantage of the team is, consensus can be achieved among the major stakeholders and Tribes to reduce later conflict concerning improperly addressed DOE decisions.
- Current river segmentation obscures the fact that there are large areas along the river corridor with data gaps. Segmentation must reflect and clearly show these gaps. Areas with insufficient data should not be assessed in the screening assessment.

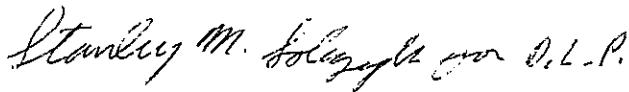
- ERWM strongly recommends the use of soil data within the screening assessment. The soil medium is an integral part of a thorough risk assessment, and non-use indicates a substantial data gap.

ERWM applauds DOE acceptance of the CRCIA process and encourages DOE to expand this process to other Hanford site management groups facilitating proper stakeholder and Tribal inclusive decision making at Hanford. Long term incorporation of this management style will save DOE, the Hanford site and the public conflict induced problems and money in general. The Nez Perce Tribe is proud to be a part of this process.

The Nez Perce Tribe ERWM appreciates the opportunity to provide comment on **Draft Screening Assessment and Requirements for a Comprehensive Assessment, April 1997; DOE/RL-96-16 Rev 0, UC-630**

If you wish to discuss Nez Perce ERWM's comments further please contact us at (208) 843-7375.

Sincerely,

A handwritten signature in cursive script, appearing to read "Donna L. Powaukee".

Donna L. Powaukee
ERWM Manager

cc: John Wagoner, DOE-RL, Site Manager
Kevin Clarke, DOE-RL, Indian Programs Manager
Steve Alexander, Ecology, Perimeter Areas Section Manager
Douglas Sherwood, EPA, Hanford Project Manager
Russell Jim, YIN, ER/WM Manager
J.R. Wilkinson, CTIUR, SSRP Manager

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RESPONSE TO

**DRAFT SCREENING ASSESSMENT AND REQUIREMENTS FOR A
COMPREHENSIVE ASSESSMENT, APRIL 1997; DOE/RL-96-16 REV 0, UC-630**

Comments Prepared By:

Nez Perce Tribe
Department of Environmental Restoration and Waste Management Staff

June 26, 1997

THE NEZ PERCE TRIBE
**ENVIRONMENTAL RESTORATION & WASTE MANAGEMENT
DEPARTMENT**

**COMMENTS ON THE
DRAFT SCREENING ASSESSMENT AND REQUIREMENTS FOR A
COMPREHENSIVE ASSESSMENT, APRIL 1997; DOE/RL-96-16 REV 0, UC-630**

Since 1855 Nez Perce Tribe treaty rights in the Mid-Columbia have been recognized and affirmed through a series of federal and state actions. These actions protect Nez Perce interests to utilize their usual and accustomed resources and resources areas in the Hanford Reach of the Columbia River and elsewhere. Accordingly, the Nez Perce Tribe Department of Environmental Restoration and Waste Management (ERWM) has DOE support to participate in and monitor certain DOE activities. The Nez Perce Tribe ERWM responds to documents calling for public comment from DOE. The program critically reviews and comments on documents in an objective and straight forward manner. Each document review is provided in a format that lists the Page number, Column number and or Paragraph number: Comment. Following are specific comments on the **Draft Screening Assessment and Requirements for a Comprehensive Assessment, April 1997; DOE/RL-96-16 Rev 0, UC-630**

SPECIFIC COMMENTS:

Page lxi, Paragraph 5

In the first sentence "geological" should be deleted.

Page xxxii, Box on Lower Left

DOE's commitment to a comprehensive assessment as outlined here does not agree with the "Disclaimer" on page II-ii.

Page xxxiii, First Paragraph

Why didn't DOE participate in the preparation of the comprehensive requirements?

Page xli, extrapolation

A proper definition of extrapolation is to infer or estimate by projecting or extending known information not to mix spatial data.

Page lxxii, 200 Areas

Tanks within the 200 Areas are known to have leaked millions of curies of radioactive waste into the soil column. Groundwater from the 200 Areas containing chemical and radioactive contaminants have reached the Columbia River and continue to flow into the river. These facts should be mentioned in the text.

Page lxxix, Columbia River Sediment

The extent of Columbia River radionuclides contamination has never been thoroughly investigated. The possibility exists that individuals on the river shoreline and islands may come into contact with discrete cobalt-60 particles.

Page I-2.48, Discrete Radioactive Particles

The actual amount of neutron activated material transported to the Columbia River is not known. Studies completed by DOE-RL contractors have not concentrated on areas of the river system where these particles are predisposed to accumulate.

Page I-2.52, Existing Groundwater Plumes, Third Paragraph

The mobility of cesium under 200 Area tank farms has been shown to be much greater than previously thought. This information must be considered in a fully comprehensive assessment.

Page I-2.56, Carbon tetrachloride

Why is carbon tetrachloride being excluded from the screening assessment when there is a carbon tetrachloride plume in the 100 F Area.

Page I-3.2, Table 3.1

The Nez Perce Tribe ERWM strongly supports the use of soil data within the screening assessment. We support a sitewide vadose characterization program as well. Lack of soil data inclusion is a data gap.

Page I-3.3, Segmentation

Current river segmentation obscures the fact that there are large areas along the river corridor with data gaps. Segmentation must reflect and clearly show these gaps. Areas with insufficient data should not be initially assessed in the screening assessment.

Page I-3.30, Process Used to Select Groundwater Data, Last Sentence

This statement is referenced inappropriately as Peterson, 1994. This study only used data in the 100-H Area not throughout the 100 Area's.

Page I-3.32, Choose a Representative Well Maximum

The statement: "For upward trending data, the maximum concentration was more conservative than the maximum of the current time period, so the overall maximum was used." needs clarification.

Page I-3.33, Table 3.6

What is the distribution of the outliers? Are minimum values excluded as well as maximum values?

Page I-3.43, Last Paragraph

The explanation given for truncation of some distributions serves to arbitrarily limit the maximum values used in the stochastic analysis of risk. If the data is insufficient or inappropriate to do a stochastic analysis, then the analysis should not be performed.

Page 3.52, 3.5.1 Extrapolation and Surrogation,

The use of upstream samples for down-river locations is not a valid extrapolation. Where there are data gaps no analysis should be performed.

Page I-3.53, Table 3.9

This table calls attention to the lack of data available for this assessment and indicates the need for a future comprehensive assessment.

Pages I-4.3 & 4.4, Figures 4.1 and 4.2

The titles for these figures indicate that these webs were approved by the CRCIA team. The insinuation is that these food webs are only presented in their present form because the CRCIA Team approved them. We do not think the CRCIA Team should be held accountable for inadequate and misleading information.

Terms in Figure 4.2 such as anadromous, demersal, macrophytes, piscivore, pelagic, CPOM and benthic should be deleted because many reviewers do not understand what these terms mean. The line widths which are supposed to indicate the approximate level of biomass flow should be eliminated. There is no indication of scale given for the thickness of the lines and for the purposes of this document does not add value.

As indicated in our letter in December of 1995 there are relationships presented in the diagrams which are inaccurate or extremely rare. For instance, Figure 4.2 indicates that harriers eat avocets, yellowlegs, dowitchers, scaup, bufflehead and goldeneye. As far as we are aware, harriers have only been documented to prey on rodents, insects and passerine birds. Also, avocets are extremely rare along the Columbia River, but are very common during the summer at West Lake.

Raccoons, skunks, and otters are listed as major carnivores. These species are uncommon and their importance in the Hanford ecosystem should not be overstressed.

Whitefish are listed as the only omnivore which is probably not the case, carp eat both vegetation and insects. Whitefish are eaten by herons, otters, mergansers and other animals; this is not depicted.

Lizards which exist in the riparian corridor and consume insects and in turn are preyed upon by birds, badgers and other predators; this information is not depicted.

Snakes which are not depicted in the diagram are eaten by ravens, red-tailed hawks, Swainson's hawks, Ferruginous hawks and other raptors, all which can be found foraging along the riparian zone of the Hanford Reach.

Quail and pheasants in diagram 4.1 are shown to be preyed upon by raptors. Other animals such as badgers, raccoons, skunks, weasels and coyotes also prey upon these species especially the young and juveniles.

Amphibians which are discussed in section 4.1.1.1 are not shown in the riparian diagram. In the riparian zone they are preyed upon by snakes, herons, ravens, etc. Amphibians should be represented in both models.

Bobcats, though uncommon, are a predator that has been documented along the Hanford Reach preying upon rabbits, small mammals and porcupines. Bobcats are probably more common than skunks and raccoons and need diagram depiction as well.

Top carnivores missing include other raptors such as red-tailed hawks, Swainson's hawks and Ferruginous hawks.

Weasels are another carnivore not included in the riparian model. Weasels are more common than skunks and raccoons and are preyed upon by raptors.

Bats which eat insects are not shown in the aquatic food web.

Page I-4.28, Table 4.17

At the Hanford Natural Resource Trustee Council meeting on May 8, 1997, Mr. Brandt indicated that the species of concern listed in Table 4.17 were represented in the food web diagrams. If you do a comparison between the diagrams and the table will show that many species of concern are not represented in the food web diagrams including several species listed in the diagrams not present in Table 4.17. The food webs should present an accurate depiction of those species presented in Table 4.17.

Page I-4.74, Paragraph 1

In the discussion on filtered verses unfiltered data it is stated that aquatic organism body burden results are inflated by using all data rather than just filtered data. The discussion appears to argue against the validity of the assessment on this basis. ERWM supports the use of both filtered and unfiltered data because it is most representative of true aquatic intake.

Page I-5.5

The screening assessment Human Health scenarios are listed including a discussion of the Native American scenarios. ERWM applauds the inclusion of the Native American scenarios as the most accurate representation to date of subsistence risk along the River.

Page I-5.54, Table 5.14

Human health risk is coordinated with ecosystem models in this table with all types of fish grouped together. Due to the variety of contaminant concentration values in different varieties of fish a more useful assessment would assess human health by considering fish variety consumption differences. We realize this calls attention to the fact that more studies are needed for assessing human health related to fish and other biota consumption. Lack of information in this area calls for studies to embellish a more comprehensive assessment later on.

Page I-5.102, Table 5.35

The table appears to be a very good graphical method of showing the amount of risk due to past Hanford operations.

Pages I-5.112 & I-5.113, Section 5.2.6.2, Areal Density of Particles

The text states "... settling into low spots rather than distributing uniformly throughout the sediment or accumulating in sandy spots." This statement is incorrect when examined with standard sedimentological principals. Based on Stokes Law and the physical properties of sand and stellite (Sula, 1980; Cooper and Woodruff, 1993), cobalt-60 particles (stellite) entrained into the river's bedload have preferentially settled in areas dominated by sand-size grains. The sandy areas of the Hanford Reach have never been thoroughly examined for the presence of radionuclides. For example, the sandy portion of D island "has not received a detailed survey for discrete radioactive particles."

The surveys which have been done to date have been randomly placed while the deposition of these cobalt-60 particles by the Columbia River is not a random process. Therefore, determining a concentration of cobalt-60 particles based on a random sampling pattern is strongly biased toward underestimating the actual concentration of cobalt-60 particles in the Columbia River shoreline.

Due to shielding by soil, water, vegetation, and air as well as the motion of the detector, aerial gamma-ray surveys lack the sensitivity and resolution required to aid in the determination of cobalt-60 particle concentration. Non-random cobalt-60 particle distribution into discrete areas and the presence of water within the detector's 'field of view' (Sula, 1980) further reduces the utility of aerial gamma-ray surveys in determining the potential for cobalt-60 particles.

ERWM asks: What is the total volume of discrete radioactive particles within the Hanford Reach and what is the evidence which supports this estimate?

Page I-5.113, Table 5.20

The units for the particle activities should be specified.

Page I-5.115, Section 5.2.6.4, Results for Colbalt-60 Particles

Without a reliable survey of the Hanford Reach for discrete radioactive particles estimating the amount of radioactive particles deposited in the river, a credible risk assessment is not possible.

Page I-5.120, Section 5.2.7.12, Segment 12: White Bluffs Slough

Riverbed sediments and floodplain soils of the Hanford Reach constitute a sink for many of the contaminants released to the environment by Hanford's operations. The greatest concentration of contaminants along the Hanford Reach should occur in the slough areas because they are where sediments accumulate. ERWM does not believe these areas have been investigated with the intent of discovering areas of contamination.

Page I-5.121, Section 5.2.7.14, Segment 14: F Slough

Same as previous comment.

Page I-5.122, Section 5.2.7.16, Segment 16: Hanford Slough

Same as previous comment.

Page I-6.1, Section 6.0, Synthesis of Results

An additional question needs to be added here. The question is: "Is there sufficient data to do a credible risk assessment?"

Page I-6.9, Last Paragraph, Last Sentence

The claim is made that systematic radiological survey have been made in the past and an aerial survey is referenced. Because of the motion of the detector, distance of detector from the ground, shielding by soil, vegetation, and water, aerial surveys should not be used to preclude the presence of radiological contaminated areas.

Page I-6.2, Figure 6.1

This table and others like it shown earlier in the CRCIA document are good for showing risk graphically, but some important information is missing. Areas and contaminants with insufficient data for assessment should be indicated, otherwise it is inferred the entire area and contaminant set has been evaluated and this is not true.

Page II-7

The cultural perspective, mentioned on this page, is an idea supported by ERWM for inclusion in this document and associated studies.

Page II-2.2, Assessment Software Requirements

ERWM feels Part II is overstepping its bounds by trying to govern the type of software used in assessment.

Page II-1.2, Assessment Concept, Figure 4

The idea of review after change of state of any site scenario or state is an idea supported by ERWM.

Page II-A.1, Appendix II-A, What the Assessment Must Include

The desire for a comprehensive assessment is positive but ERWM questions that any study can be so focused as to include all aspects from inventories to receptor impact. It is more likely that Hanford site management could screen assessments to assure the sum

total of assessments performed in a time period would include all of these steps.

Page II-D.1, Conducting and Managing the Assessment, Figure D.1

ERWM supports the CRCIA management board type decision process as shown in this figure. This type of management at Hanford must be expanded to include other site management activities.